NCEA also acts as a catalyst for advances in the science of risk assessment by bringing together federal, state and local scientists, industrial, environmental communities. establish credible

and the academic, and scientific NCEA works to public and private partnerships to enhance and refine the science of risk assessment.

NCEA Organization

NCEA is a multi-disciplinary team of about 200 scientists and support staff trained in such diverse academic disciplines as ecology, environmental science, epidemiology, microbiology, toxicology, physical sciences, computer science, and engineering. NCEA headquarters is located in Washington, DC, along with one of its three research offices and the staff supporting the RAF. The other two offices are located in Cincinnati, OH, and Research Triangle Park, NC. NCEA conducts its extramural research through contracts, cooperative agreements with universities and other nonprofit organizations, and agreements with federal and state agencies. In addition, NCEA provides temporary training opportunities for undergraduate and graduate students and recent doctoral awardees.

NCEA Leadership

Overall leadership is provided by the following:
William H. Farland, Ph.D., NCEA Director
George W. Alapas, DPA, Deputy Director for Management
Vanessa T. Vu, Ph.D., Associate Director for Health
Michael Slimak, M.S., Associate Director for Ecology

For more information about NCEA

Visit the NCEA website at
www.epa.gov/ncea or call 202-564-3322.

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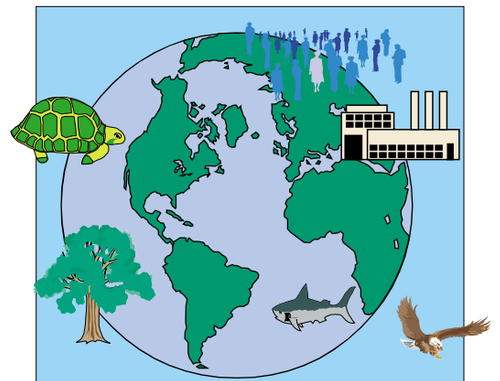


Applying Science to Improve Risk Assessment & Environmental Decision Making

Who Are We?

The mission of the U.S. Environmental Protection Agency (EPA) is to protect human health and to safeguard the air, water, and land upon which life depends. EPA's Office of Research and Development (ORD) conducts research to help ensure that efforts to reduce environmental risks are based on the best available scientific information.

The National Center for Environmental Assessment (NCEA), a major component of ORD with headquarters in Washington, DC, is EPA's national resource center for human health and ecological risk assessment. NCEA conducts risk assessments, carries out research to improve the state-of-the-science of risk assessment, and provides guidance and support to risk assessors.

NCEA occupies a critical position in ORD between (1) researchers in other ORD components generating new findings and data and (2) regulators in the EPA program offices and regions who must make regulatory, enforcement, and remedial action decisions. As a result, NCEA plays an important role as a consultant to EPA programs and regions on the use of science in environmental decision making and also influences the direction of environmental research.

What Is Risk Assessment?

Risk is the probability (or likelihood) that a harmful consequence will occur as a result of an action. Risk is a function of hazard and exposure. For risk to occur, there must be a source of risk (hazard) and an exposure to the hazard. *Risk assessment* is the process by which one attempts to evaluate and predict the likelihood and extent of harm (in qualitative and quantitative terms) that may result from a health or environmental hazard. *Risk assessment* provides essential information about the severity and extent of specific environmental problems for use in EPA risk management decisions.

Three Major Work Areas

NCEA supports EPA's mission through:

- ***Risk Assessment***

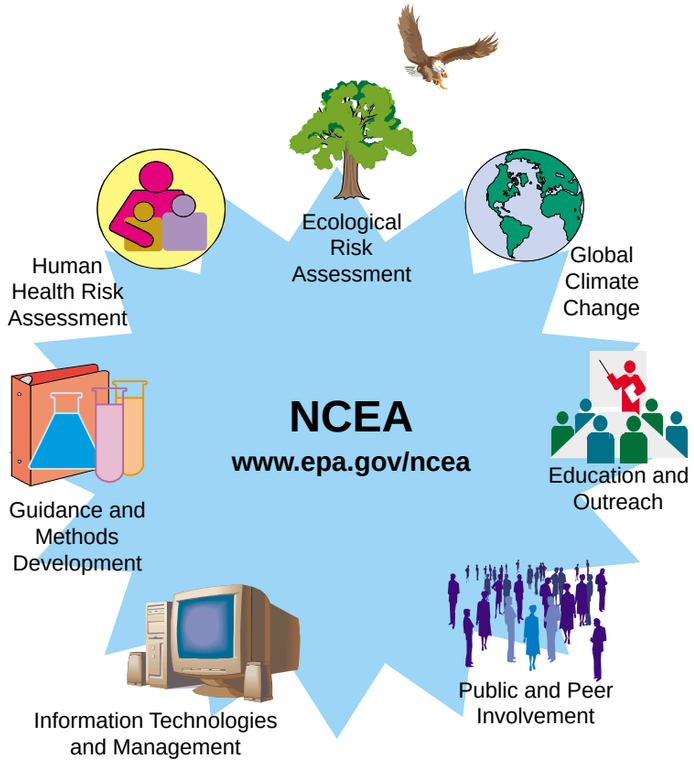
  Conducting assessments of national significance, for example, assessments of dioxin, environmental tobacco smoke, mercury, PCBs, trichloroethylene, diesel emissions, and the consequences of global climate change for selected U.S. regions and sectors.

- ***Methods Research***

  Improving the state-of-the-science of risk assessment by developing scientifically sound, defensible risk assessment methods which incorporate the latest advances in science. Examples include Risk Assistant™, benchmark dose software, Environmental Information Management System (EIMS), and inhalation dosimetry methods.

- ***Guidance and Support***

  Providing guidance, scientific information, consultation, training, and support to other risk assessors and risk managers. Examples include ecological and cancer risk assessment guidelines, IRIS (Integrated Risk Information System), Exposure Factors Handbook, and the dioxin emissions inventory.



What Are We Working On Now?

NCEA's current activities include:

- Characterizing the impacts on ecological and human systems, whether they result from exposure to single, complex, or multiple physical, chemical, or biological stressors.
- Integrating approaches to cancer and noncancer effects in risk assessments.
- Developing risk assessment methods to account for sensitive populations, particularly children.
- Advancing the integration of ecological risk assessment with human health assessment.
- Assessing the consequences of global climate change on human health and ecosystems.
- Developing advanced science information management systems such as EIMS (www.epa.gov/eims) to facilitate risk assessment.
- Developing new approaches to application of risk assessments in decision making, such as comparative risk assessment.
- Managing the IRIS program, which develops Agency-wide assessments on the potential human health effects of exposure to various chemicals in the environment (www.epa.gov/iris).
- Administering and providing scientific support to EPA's Risk Assessment Forum (RAF), which promotes Agency-wide consensus on difficult or controversial risk assessment issues.
- Influencing ORD's future research agenda by proposing key research needs identified by risk assessments.

Accomplishments

Details about NCEA's accomplishments can be found on the website at www.epa.gov/ncea. The website includes all of NCEA's published documents, software, and databases since May 1997, as well as many other key documents from prior years.